Abstract

Introduction: Recently, medicinal plants have been noticed by many people, especially pharmaceutical scientist researchers; plants are massive resource for discovering the compounds with pharmacologic and biologic activity. As several studies were performed to determine treatment effects of medicinal plants and their chemical compositions.

Levisticum officinale has antimicrobial activity. In this research, one of the ethyl acetate fractions of the root, was investigated for isolation and identification of antibacterial compounds against E.coli and S.aureus.

Method: Chromatography methods, including column chromatography and thin layer chromatography was used for isolation of the compounds . Also for identification of the isolated compounds, 1D NMR (^{1}H-NMR and ^{13}C-NMR) and 2D NMR (H-H COSY, HSQC and HMBC) methods was used.

Results: One compound was isolated from the ethyl acetate fraction. This compound with Iupac name of (E)-4-hydroxycinnamyl 3-(4-hydroxy-3-methoxyphenyl) acrylate is one of the ferulic acid derivatives with acceptable antibacterial effect against *S.aureus* and *E.coli*.

Keywords:

Levisticum officinale, NMR, Column chromatography, Antibacterial activity